60V Buck LED Driver with Dimming Functions

The AL8862 is a step-down DC-DC converter designed to drive LEDs with a constant current, that operates with an input supply voltage from 5V to 60V. It provides an externally adjustable output current up to 1A.

The AL8862 integrates a low $R_{DS(ON)}$ power switch and a high-side output current sensing circuit.

The maximum output current of AL8862 is set via an external resistor connected between the VIN and SET input pins. Dimming is achieved by applying either a DC voltage or a PWM signal at the CTRL input pin.

It is available in the thermally enhanced SO-8EP package.

The Diodes’ Advantage

The AL8862 is a step down DC-DC converter that provides an externally adjustable output current up to 1A.

- Integrated 60V/0.4Ω power MOSFET supports LED current up to 1A
  - Requires fewer external components to achieve higher efficiency
  - Supports high power applications
- Input voltage range from 5V to 60V
  - Delivers a wide range of input voltages to support a broad spectrum of applications.
- Dimming range from 0% to 100% for PWM dimming
  - Broad dimming range capability
- Built-in protections against LED Short/Open, thermal overload (OTP) protections ensure for a reliable system.
  - Provides a reliable system performance

Applications

- Industrial Lighting
- Architectural Lighting
- External Driver with Multiple Channels
Typical Application Circuit

Product Portfolio

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Min. Input Voltage</th>
<th>Max. Input Voltage</th>
<th>Max. Output Current</th>
<th>Reference Voltage Accuracy</th>
<th>Switching Frequency</th>
<th>Efficiency</th>
<th>Ambient Temperature Range</th>
<th>Package</th>
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<tr>
<td>AL8862</td>
<td>5 V</td>
<td>60 V</td>
<td>1 A</td>
<td>+/- 4%</td>
<td>1 MHz</td>
<td>&gt;95%</td>
<td>-40~ +105</td>
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<td>40 V</td>
<td>3 A</td>
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To find out more information:

Product Page: [https://www.diodes.com/part/AL8862](https://www.diodes.com/part/AL8862)

Datasheet: [https://www.diodes.com/assets/Datasheets/AL8862.pdf](https://www.diodes.com/assets/Datasheets/AL8862.pdf)

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package Code</th>
<th>Package</th>
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<td>SP</td>
<td>SO-8EP</td>
<td>2,500/Tape &amp; Reel</td>
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www.diodes.com